Response under 37 C.F.R. 1.116

Applicant: Ivan J. Baiges Serial No.: 10/057,619 Filed: January 24, 2002 Docket No.: 10017070-1

Title: INKJET PRINTING SYSTEM EMPLOYING MULTIPLE INKJET PRINTHEADS AND METHOD OF

PERFORMING A PRINTING OPERATION

REMARKS

This Response is in reply to the Final Office Action mailed April 7, 2004 in which claims 1-19 and 21-44 were rejected. Claims 1-19 and 21-44 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 103

Claims 1-6, 8-14, 18, 19, 21-28, 30-33, and 35-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yashima et al. U.S. Patent No. 6,164,747 in view of Granzow U.S. Patent No. 5,677,719. Claims 7 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yashima et al. in view of Granzow, and further in view of Logan U.S. Patent No. 4,910,871. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yashima et al. in view of Granzow, and further in view of Asakawa U.S. Patent No. 4,940,998. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yashima et al. in view of Granzow, and further in view of Chapin et al. U.S. Patent No. 5,838,343. Applicant respectfully traverses these rejections.

The printing system of independent claim 1 recites that "the first marking engine is excluded from depositing the first marking fluid on the second portion of the print media and the second marking engine is excluded from depositing the second marking fluid on the first portion of the print media", and the inkjet printing system of independent claim 19 includes a first mechanism for moving a first printhead assembly relative to the print media so that the first printhead assembly "can deposit ink only on a first unprinted portion of a first side of the print media" and includes a second mechanism for moving a second printhead assembly relative to the print media so that the second printhead assembly "can deposit ink only on a second unprinted portion of the first side of the print media". The method for performing a printing operation of independent claim 30 includes "positioning of the print media for printing on a first portion of a first side thereof with the first printhead assembly and for printing on a second portion of the first side thereof different than the first portion with the second printhead assembly" "before depositing any ink on the print media with either of the first and second printhead assemblies", and the system for printing of independent claim 44 includes means for moving across the print media and depositing a first marking fluid "only on a first portion of a first side of the print media", means for moving across the print media

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and depositing a second marking fluid "only on a second portion of the first side of the print media", and means for moving the print media, wherein "before either of the means for moving across the print media and depositing the first marking fluid deposits any of the first marking fluid and the means for moving across the print media and depositing the second marking fluid deposits any of the second marking fluid, the means for moving the print media positions the first portion of the print media for printing thereon by the means for moving across the print media and depositing the first marking fluid and positions the second portion of the print media for printing thereon by the means for moving across the print media and depositing the second marking fluid".

The Examiner contends that the Yashima et al. patent discloses a printing system/method for printing comprising a first marking engine/printhead assembly for depositing a first marking fluid on a first portion of a first side of the print media, and a second marking engine/printhead assembly for depositing a second marking fluid on a second portion of a first side of the print media. The Examiner recognizes, however, that the Yashima et al. patent fails to disclose, regarding claim 1, that the first marking engine is excluded from marking on the second portion and that the second marking engine is excluded from marking on the first portion, fails to disclose, regarding claim 19, that the first printhead assembly deposits ink only on the first unprinted portion and that the second printhead assembly deposits ink only on the second unprinted portion, and fails to disclose, regarding claims 30 and 44, initially positioning the print media so that the first printhead assembly/means for moving deposits ink only on the second portion and the second printhead assembly/means for moving deposits ink only on the second portion.

The Examiner contends that the Granzow patent discloses positioning an unprinted print receiving surface so that a first movable printhead assembly and a second movable printhead assembly deposit ink only on a first and second portion respectively without depositing ink on other portions. As such, the Examiner suggests that it would have been obvious to one having ordinary skill in the art at the time the invention was made to position an unprinted medium in the system and method of Yashima et al. so that the first movable printhead assembly and the second movable printhead assembly deposit ink only on the first and second portions respectively without depositing ink on other portions as suggested by Granzow.

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Applicant submits, however, that modifying the Yashima et al. patent in view of the Granzow patent, in the manner suggested by the Examiner, would render the Yashima et al. patent unsuitable for its intended purpose. See MPEP 2143.02. For example, the Yashima et al. patent discloses that first recording means (i.e., recording head 31A), which has two or more types of recording agents of different densities but of the same color, and second recording means (i.e., recording head 31B), which is situated at a position different from a position at which the first recording means is situated and has two or more types of recording agents of different densities but of the same color, print "a combination of the recording agents used to record a pixel of the grayscale image that is to be recorded on the recording medium, wherein one or more of the recording agents possessed by each of said first and second recording means is included in the combination" (col. 4, lines 40-65; col. 5, lines 12-37; see also col. 20, lines 32-52; Fig. 10). As such, the Yashima et al. patent discloses that by printing a plurality of inks of different densities "in superposition on the same pixel", the number of tones capable of being expressed can be increased greatly (col. 7, lines 20-23). Accordingly, the Yashima et al. patent discloses that "two-pass recording by each of the recording heads 31A, 31B, which recording is a characterizing feature of the invention, is achieved" (col. 20, lines 50-52).

The Yashima et al. patent, therefore, discloses that each of the recording heads 31A, 31B prints within the same pixel. Thus, the recording heads 31A, 31B of the Yashima et al. patent both must print within the same portion of a recording medium. Accordingly, modifying the Yashima et al. patent in the manner suggested by the Examiner so that the first movable printhead assembly (i.e., recording head 31A) and the second movable printhead assembly (i.e., recording head 31B) deposit ink only on the first and second portions respectively without depositing ink on other portions is contrary to the teaching of the Yashima et al. patent wherein each of the recording heads 31A, 31B prints within the same pixel.

Applicant, therefore, respectfully submits that modifying the Yashima et al. patent by the Granzow patent, in the manner suggested by the Examiner, would defeat the purpose of the Yashima et al. patent. Because modifying the Yashima et al. patent by the Granzow patent, in the manner suggested by the Examiner, would render the Yashima et al. patent

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unsatisfactory for its intended purpose, Applicant submits that there is no suggestion or motivation to make the proposed modification.

With respect to the Yashima et al., Granzow, Logan, Asakawa, and Chapin et al. patents, Applicant submits that none of these patents, individually or in combination, teach or suggest a printing system as claimed in independent claim 1, an inkjet printing system as claimed in independent claim 19, a method of performing a printing operation as claimed in independent claim 30, nor a system for printing as claimed in independent claim 44.

In view of the above, Applicant submits that independent claims 1, 19, 30, and 44 are patentably distinct from the Yashima et al., Granzow, Logan, Asakawa, and Chapin et al. patents and, therefore, are in a condition for allowance. Furthermore, as dependent claims 2-18 and 35-37 further define patentably distinct claim 1, dependent claims 21-29 and 38-40 further define patentably distinct claim 19, and dependent claims 31-34 and 41-43 further define patentably distinct claim 30, Applicant submits that dependent claims 2-18 and 35-37, dependent claims 21-29 and 38-40, and dependent claims 31-34 and 41-43 are also in a condition for allowance. Applicant, therefore, respectfully requests that the rejections of claims 1-19 and 21-44 under 35 U.S.C. 103(a) be reconsidered and withdrawn and that claims 1-19 and 21-44 be allowed.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-19 and 21-44 are all in a condition for allowance and requests reconsideration of the application and allowance of all pending claims.

Any inquiry regarding this Response should be directed to either Robert D. Wasson at Telephone No. (360) 212-2338, Facsimile No. (360) 212-3060 or Scott A. Lund at Telephone No. (612) 573-2006, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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